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ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*

(54) Title: **MUCUNA PRURIENS AND EXTRACTS THEREOF FOR THE TREATMENT OF NEUROLOGICAL DISEASES**

(57) Abstract: The present invention provides pharmaceutical compositions comprising *Mucuna pruriens* seeds or one or more *Mucuna pruriens* seed components, substances, fractions or mixtures or substances obtained therefrom. Furthermore, the invention relates to the use of *Mucuna pruriens* seed powder or one or more *Mucuna pruriens* components, substances, fractions or mixtures or substances obtained therefrom for the preparation of a pharmaceutical composition for preventing, alleviating or treating neurological diseases. Additionally, the invention relates to the use of *Mucuna pruriens* seeds for the preparation of a pharmaceutical composition for neuroprotection or neurostimulation and to methods of preparing extracts of *Mucuna pruriens* which can be used for the preparation of a pharmaceutical composition for treating neurological diseases. Finally, the invention relates to the use of *Mucuna pruriens* seeds for the preparation of a pharmaceutical composition for the treatment of Parkinson's Disease to obtain a broader therapeutic window in L-Dopa therapy, to delay a need for combination therapy, to obtain an earlier onset and longer duration of L-Dopa efficacy, and to prevent or alleviate acute and chronic L-Dopa toxicity.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/10975

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 A61K35/78 A61P25/16

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, EMBASE, MEDLINE, BIOSIS, PAJ, COMPENDEX

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 106 839 A (PRUTHY PUNEET ET AL) 22 August 2000 (2000-08-22) abstract	1-20, 26-30
X	US 3 666 802 A (ADAMS PHILLIP ET AL) 30 May 1972 (1972-05-30) abstract column 1, line 6 - line 10	1-20, 26-30
X	VAIDYA A B ET AL: "Treatment of Parkinson's disease with the cowhage plant - Mucuna pruriens Bak" NEUROLOGY INDIA 1978 INDIA, vol. 26, no. 4, 1978, pages 171-176, XP009024725 Introduction & Discussion ----- -/-	1-20, 26-30

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search

28 January 2004

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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/10975

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	HUSSAIN G ET AL: "Mucuna pruriens proves more effective than L-DOPA in Parkinson's disease animal model" PHYTOTHERAPY RESEARCH 1997 UNITED KINGDOM, vol. 11, no. 6, 1997, pages 419-423, XP009024754 ISSN: 0951-418X abstract	1-20, 26-30
X	"An alternative medicine treatment for Parkinson's disease: results of a multicenter clinical trial. HP-200 in Parkinson's Disease Study Group." JOURNAL OF ALTERNATIVE AND COMPLEMENTARY MEDICINE (NEW YORK, N.Y.) UNITED STATES 1995 FALL, vol. 1, no. 3, October 1995 (1995-10), pages 249-255, XP009024734 ISSN: 1075-5535 abstract	1-20, 26-30
X	MANYAM BALA V ET AL: "An open efficacy and tolerability study of HP-200 in Parkinson's disease" NEUROLOGY, vol. 44, no. 4 SUPPL. 2, 1994, page A369, XP009024722 46th Annual Meeting of the American Academy of Neurology; Washington, D.C., USA; May 1-7, 1994 ISSN: 0028-3878 abstract	1-20, 26-30
X	MAHAJANI S S ET AL: "Bioavailability of L-DOPA from HP-200 - A formulation of seed powder of Mucuna pruriens (Bak): A pharmacokinetic and pharmacodynamic study" PHYTOTHERAPY RESEARCH 1996 UNITED KINGDOM, vol. 10, no. 3, 1996, pages 254-256, XP009024724 ISSN: 0951-418X Introduction & Discussion	1-20, 26-30
X	NAGASHAYANA N ET AL: "ASSOCIATION OF L-DOPA WITH RECOVERY FOLLOWING AYURVEDA MEDICATION IN PARKINSON'S DISEASE" JOURNAL OF NEUROLOGICAL SCIENCES, ELSEVIER SCIENTIFIC PUBLISHING CO, AMSTERDAM, NL, vol. 176, no. 2, 15 June 2000 (2000-06-15), pages 124-127, XP001147413 ISSN: 0022-510X abstract	1-20, 26-30

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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/10975

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>MANYAM B V ET AL: "Traditional and complementary therapies in Parkinson's disease."</p> <p>ADVANCES IN NEUROLOGY. UNITED STATES 1999, vol. 80, 1999, pages 565-574, XP009024735</p> <p>ISSN: 0091-3952</p> <p>page 569, column 2, line 1 - page 570, column 3, line 28</p> <p>-----</p>	<p>1-20, 26-30</p>

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP 03/10975

## Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 1-20, 26 to 30 (part)  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  
1-20, 30 + 26-29 in part

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1-20, 26 to 30 (part)

Present Claim 1 relates to a pharmaceutical composition comprising one or more *Mucuna pruriens* seed COMPONENTS, SUBSTANCES, FRACTIONS or MIXTURES of substances obtained therefrom and a pharmaceutically acceptable diluent, excipient or carrier. Thus Claim 1 appears to define not only a pharmaceutical composition comprising components extracted from *Mucuna pruriens* but also pharmaceutical compositions comprising ANY SUBSTANCE OBTAINABLE from *Mucuna pruriens*, e.g. commonly used pharmaceutical substances such as 5-hydroxytryptamine, alanine, arginine or L-DOPA (see present page 4 lines 31 to page 5 line 12) . Thus, present Claim 1 appears to define, at least in part, conventional pharmaceutical compositions for which thousands of novelty destroying disclosures may be found. Thus, a search covering the full scope of present Claim 1 is not feasible.

Even a preliminary more restricted search covering pharmaceutical compositions comprising only extracts of *Mucuna pruriens* revealed many hundreds of disclosures of such pharmaceutical compositions. This appears to confirm the many known traditional uses of extracts of *Mucuna pruriens* as disclosed by the Applicant in the present description (see present page 5 lines 12 to 17).

Thus, the search was restricted to subject matter for which a search was feasible and for which there appears to be some support in the description, namely the use of *Mucuna pruriens* for the preparation of pharmaceutical compositions for the treatment of neurological disorders, i.e. Huntington's disease, Alzheimer's disease or Parkinson's disease. The Applicant is warned however, that, in view of the many relevant documents found, that further searching may be necessary at a later stage.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No

PCT/EP 03/10975

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6106839	A	22-08-2000	NONE	
US 3666802	A	30-05-1972	NONE	